

## OREGON.

The month opened warm and closed with clear, cool weather and general light frosts.

**Temperature.**—The mean was 0.7 above the normal; maximum, 100, at Lakeview, 2d; minimum, 22, at Weston and Beulah, 30th.

**Precipitation.**—The average was 0.70 above the normal; greatest monthly, 6.14, at Astoria; least monthly, 0.00, at New Bridge.

**Wind.**—Prevailing direction, southwest.—*Hon. H. E. Hayes, Master State Grange, Portland, director; B. S. Pague, Observer, Weather Bureau, asst.*

## PENNSYLVANIA.

**Temperature.**—The mean was 5.4 above the normal; maximum, 94, at Coatsville, 26th, and at Somerset, 17th; minimum, 32, at Wellsborough and Columbus, 30th; greatest monthly range, 61, at Somerset; least monthly range, 37, at Erie.

**Precipitation.**—The average was 1.18 below the normal; greatest monthly, 5.00, at Kennett Square; least monthly, 1.05, at Carlisle.

**Wind.**—Prevailing direction, southwest.—*Under direction of the Franklin Institute, Philadelphia; L. M. Dey, Observer, Weather Bureau, assistant.*

## SOUTH CAROLINA.

**Temperature.**—Maximum, 92, at Batesburgh, Greenville, and Spartanburgh, 19th, and at Columbia, 23d; minimum, 50, at Spartanburgh, 28th.

**Precipitation.**—Greatest monthly, 6.06, at Charleston; least monthly, 0.49, at Greenville.

**Wind.**—Prevailing direction, northeast.—*A. P. Butler, Observer, Weather Bureau, Columbia, director.*

## SOUTH DAKOTA.

**Temperature.**—The mean was about 8.0 above the normal; maximum, 107, at Forest City, 16th; minimum, 24, at Brookings, 29th; greatest monthly range, 76, at Webster; least monthly range, 53, at Spearfish.

**Precipitation.**—The average was 0.67 below the normal; greatest monthly, 4.11, at Webster; least monthly, 0.18, at Kimball.

**Wind.**—Prevailing direction, south.—*S. W. Glenn, Observer, Weather Bureau, Huron, director.*

## TENNESSEE.

The most marked features of the month were the deficiency in rainfall and the abnormally high temperature. These conditions rendered the month rather disastrous to farmers.

**Temperature.**—The mean was 2.0 above the normal; maximum, 100, at Arlington, 22d; minimum, 44, at Arlington, 4th; greatest monthly range, 56, at Arlington, least monthly range, 18, at Lewisburgh.

**Precipitation.**—The average was 2.30 below the normal; greatest monthly, 3.08, at Bethel Springs; least monthly, 0.00, at Waynesborough.

**Wind.**—Prevailing directions, north and east.—*J. D. Plunket, M. D., Nashville, director; J. B. Marbury, Observer, Weather Bureau, assistant.*

## TEXAS.

**Temperature.**—The mean was about normal in the eastern part of the state, and above the normal in all other parts, except along the immediate coast, where there was a slight deficiency, amounting in some localities to 3.0; maximum, 100, at Graham, 12th; minimum, 40, at Orange, 7th, and at Hansford, 3d; greatest monthly range, 55, at Hansford; least monthly range, 20, at Galveston.

**Precipitation.**—The average was about normal over the central and southwestern parts of the state, and the rainfall was deficient in the extreme eastern and northwestern parts, and over the coast region it was unevenly distributed; greatest monthly, 11.49, at Brazoria; least monthly, 0.23, at El Paso.—*D. D. Bryan, Galveston, director; I. M. Cline, Observer, Weather Bureau, assistant.*

## UTAH.

**Temperature.**—The mean was above the normal during the first half of the month, and below during the latter half; maximum, 104, at Saint George, 3d; minimum, 28, at Scofield, 30th.

**Precipitation.**—The average was slightly above the normal; greatest monthly, 3.60, at Losee; least monthly, 0.62, at Deseret.—*G. N. Salisbury, Observer, Weather Bureau, Salt Lake City, director.*

## VIRGINIA.

**Temperature.**—Maximum, 100, at Richmond, 19th; minimum, 42, at Dale Enterprise, 9th; greatest monthly range, 53, at Nottoway, C. H., and Richmond; least monthly range, 31, at Norfolk.

**Precipitation.**—Greatest monthly, 3.40, at Stanardsville; least monthly, 0.98, at Wytheville.—*Dr. E. A. Craighill, Lynchburgh, director; J. N. Ryker, Observer, Weather Bureau, assistant.*

## WASHINGTON.

**Temperature.**—Maximum, 90, at Fort Simcoe, 3d; minimum, 26, at Waterville, 20th; greatest monthly range, 62, at Baker City, Oregon; least monthly range, 29, at East Sound.

**Precipitation.**—Greatest monthly, 11.06, at Tatoosh Island; least monthly, 0.06, at Fort Simcoe.

**Wind.**—Prevailing direction, south.—*E. B. Olney, Observer, Weather Bureau, Olympia, director.*

## WISCONSIN.

**Temperature.**—Maximum, 98, at Whitehall, 18th; minimum, 27, at Florence, 4th.

**Precipitation.**—Greatest monthly, 2.91, at Plover; least monthly, 0.02, at Cadiz.—*W. L. Moore, Observer, Weather Bureau, Milwaukee, director.*

## CONTRIBUTIONS AND ORIGINAL ARTICLES.

## FLUCTUATIONS OF TEMPERATURE AND PRESSURE AT THE BASE AND SUMMIT OF MOUNT WASHINGTON.

[By Prof. H. A. HAZEN, Weather Bureau.]

At the end of the maps in this Review will be found a continuation of the curves previously published in July and August. There have been added this month the fluctuations in pressure at the summit as well as at the base. It will be noted that these pressure changes present almost exactly the same phase at the summit as at the base. Frequently the summit curve lags a little behind that at the base, as has already been noted. See Annual Report of the Chief Signal Officer, 1882, pp. 897-926.

Attention is called to the remarkable abruptness of the fluctuations of temperature at Mount Washington, especially when the temperature falls after

a storm has passed and a high area approaches. Examples of this may be noted as follows: January 9, 1879, fall of 22° in 8 hours; January 25, 1879, 32° in 16 hours; February 1, 1880, 38° in 16 hours; February 9, 1880, 20° in 8 hours; March 7, 1880, 26° in 8 hours; January 22, 1882, 41° in 16 hours; February 17, 1882, 29° in 8 hours; and March 24, 1882, 24° in 8 hours.

These very rapid falls in temperature may be due to the downward action of a cold wave as a storm passes off. It invariably occurs on the east side of a high area and many hours before its center reaches the summit.

It should also be noted that the close agreement between the fluctuations of temperature at the base and summit seems to indicate some general and far-reaching effect produced by extended waves of heat and cold, rather than a more or less local effect produced by the wind or by more intense radiation to the sky at some times rather than others.

## METEOROLOGICAL TABLES.

*Meteorological record of Army post surgeons, voluntary, and other co-operating observers, September, 1891.*

Stations.	Temperature. (Fahrenheit.)			Precip'n.		Stations.	Temperature. (Fahrenheit.)			Precip'n.	
	Max.	Min.	Mean.				Max.	Min.	Mean.		
Alabama.	0	0	0	Ins.		Alabama—Cont'd.	0	0	0	Ins.	
Bermuda *†.	90	56	74.3	4.07		Double Springs †.	89	55	70.6	2.85	
Bessemer.	94	50	74.3	1.21		Eufaula (2).	90	56	74.3	0.77	
Brewton †.	95	50	76.0	2.00		Evergreen.	92	50	75.0	3.81	
Carrollton †.	92	54	72.4	1.25		Florence†.				0.57	
Chepultepec †.	80	46	67.5	0.20		Fort Deposit†.	92	54	75.1	6.90	
Citronelle †.	90	60	77.0	2.23		Gadsden †.				3.59	
Columbiana †.				3.11		Goodwater †.	87	57	73.5	4.80	
Cordova †.				3.00		Greensborough.	92	60	77.0	1.70	
Decatur (1) †.				0.87		Jasper †.	90	46	69.9	2.73	
Decatur (2) †.	92	48	70.4	1.20		Livingston (1) * †.	90	53	73.0	0.87	

*Meteorological record of voluntary observers, &c.—Continued.*

Stations.	Temperature. (Fahrenheit.)			Precip'n.		Stations.	Temperature. (Fahrenheit.)			Precip'n.	
	Max.	Min.	Mean.				Max.	Min.	Mean.		
Alabama—Cont'd.	0	0	0	Ins.		Alabama—Cont'd.	0	0	0	Ins.	
Livingston (2) †.	92	52	74.2	1.01		Talladega †.				1.57	
Lynn†.				1.32		Tallasse Falls †.				2.29	
Mt. Vernon B'ks.	93	56	76.4	3.85		Thomasville.	90	54	72.6	1.60	
Opelika†.	90	50	70.3	0.94		Tuscaloosa †.	94	53	74.8	1.46	
Orville †.	93	52	75.0	1.98		Tuscumbia (1) †.	93	54	71.5	0.75	
Oxanna†.	90	52	72.3	2.31		Tuscumbia (2) †.	94	51	72.0	0.70	
Pine Apple†.	93	53	73.2	3.25		Union Springs †.	91	61	72.8	3.59	
Pushmataha †.	91	57	75.7	0.82		Uniontown †.	92	55	75.2	2.02	
Selma (1) †.				1.93		Valley Head †.	92	48	68.4	2.70	
Selma (2) †.	94	54	76.8	1.90		Warrior †.				3.62	
Sturdevant†.				3.19							

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Fluctuations of pressure and temperature near Mount Washington, N. H.

872 1879-1883

